

PP II Questions for GPAT

1. The units for speed of a reaction is
 - A. Concentration / time
 - B. Time / concentration
 - C. Moles / L
 - D. L / mole

2. The speed of a reaction is constant in
 - A. Zero order reaction
 - B. First order reaction
 - C. Second order reaction
 - D. Pseudo first order reaction

3. The half life of a reaction is constant in
 - A. Zero order reaction
 - B. First order reaction
 - C. Second order reaction
 - D. Pseudo zero order reaction

4. A tablet has 1000 mg of drug. The drug is decomposing according to zero order kinetics. How much drug is left in the tablet after 4 half lives.
 - A. 250 mg
 - B. 4 hours
 - C. 62.5 mg
 - D. 125 mg

5. Aspirin undergoes degradation in suspensions according to
 - A. First order
 - B. Pseudo zero order
 - C. Second order
 - D. Pseudo first order

6. The concentration of a solute in saturated solution is called
 - A. Solubility
 - B. Super saturated solution
 - C. Dissolution
 - D. Saturation

7. Solubility of gases in water increases with
 - A. Temperature
 - B. Pressure of gas
 - C. Salting out process
 - D. None of the above

8. A 400 ml solution has 20 g of drug dissolved in it. What is the concentration of drug.
 - A. 5 % w/v
 - B. 5 % w/w
 - C. 10 % w/v
 - D. 5 % v/v

9. Solubility of a poorly water soluble drug in water can be increased by
 A. Co solvency
 B. Micellar solubilization
 C. Complexation
 D. All the above
10. The concentration of salicylic acid in benzene and water in a partition coefficient experiment is 75 mg / 100 ml and 25 mg / 100 ml respectively, what is the partition coefficient of salicylic acid between benzene and water.
 A. 3/1
 B. 7.5
 C. 0.75
 D. 2.5
11. Starch iodine complex is
 A. Metal ion complex
 B. Inclusion complex
 C. Drug complex
 D. Chelate
12. Methods for analysis of complexes include
 A. Solubility method
 B. pH titration method
 C. Distribution method
 D. All of the above.
13. The units for interfacial free energy are are
 A. Dynes / cm
 B. Dynes
 C. Cm
 D. Ergs / Cm²
14. A rain drop is spherical in shape because it
 A. has least surface area per unit volume
 B. has good appearance
 C. None of the above
 D. Both A and B
15. O/W emulgents have HLB value between
 A. 8 to 16
 B. 0 to 3
 C. 2 to 8
 D. 6 to 9
16. Charcoal powder is an
 A. Adsorbent
 B. Absorbent
 C. Complexing agent
 D. All the above
17. Surfactants are
 A. Amphiphiles
 B. Detergents
 C. Emulsifiers
 D. All the above.

18. Colloidal particles are in the size range

- A. Less than 1 nm.
- B. 1 nm to 0.5 μm
- C. Greater than 0.5 μm
- D. None of the above

19. Donnan membrane equilibrium is a property of

- A. Colloids
- B. Emulsions
- C. Suspensions
- D. True solutions

20. The temperature at which the solubility of surfactant equals CMC is called

- A. Kraft point
- B. Cloud point
- C. HLB
- D. None of the above

21. Viscosity of polymer dispersions can be used to determine

- A. Molecular weight of polymers
- B. Diffusion
- C. Settling
- D. Electro kinetic properties

22. Science and technology of small particles is called

- A. Angle of repose
- B. Micromeritics
- C. Rheology
- D. Bulk density

23. The bulk volume occupied by 2 g of powder is 10 ml, what is its bulkiness.

- A. 5 ml/g
- B. 5 g/ml
- C. 0.2 g/ml
- D. 0.2 ml/g

24. The diameter of a sphere having the same settling velocity as the particle has is called

- A. Stoke's diameter
- B. Settling diameter
- C. Projected diameter
- D. None of the above.

25. Optical microscopy can be used to measure particle size in the range

- A. 0.2 to 100 μm
- B. 100 to 200 μm
- B. 0.2 to 500 μm
- D. None of the above

26. What is the % porosity of a powder sample having a bulk density and true density of 0.3 g/ml and 3 g/ml respectively. Calculate the porosity of the powder.

- A. 90 %
- B. 80 %
- C. 10 %
- D. 70 %

27. The method for determination of surface area of powder particles are

- A. Sedimentation
- B. Adsorption
- C. Sieving
- D. Coulter counter

28. One of the properties is not a derived property of powders.

- A. Particle surface area
- B. Porosity
- C. Flow property
- D. Packing arrangement

29. The units of kinematic viscosity is

- A. Stokes
- B. Poise
- C. Centi poise
- D. None of the above

30. The rheogram of a plastic system

- A. Passes through the origin
- B. Has a Y intercept
- C. Cuts the X axis
- D. None of the above.

31. The following systems show thixotropy.

- A. Plastic systems
- B. Polymer dispersions
- C. Shear thinning systems
- D. All the above

32. The slope of the rheogram of plastic system is called

- A. Fluidity
- B. Mobility
- C. Viscosity
- D. Thixotrophy

33. Concentrated deflocculated suspensions show

- A. Newtonian flow
- B. Thixotrophy
- C. Dilatant flow
- D. Pseudoplastic flow.

34. Falling sphere viscometer is a

- A. Multi point viscometer
- B. Rotational viscometer
- C. Cup and bob viscometer
- D. Single point viscometer

35. The rate of shear of a liquid is $100 / \text{sec}$ when the shearing stress was 10 dynes/cm^2 , what is the viscosity of the liquid.

- A. 0.1 Poise
- B. 10 Poise
- C. 0.1 Centi poise
- D. 10 Centi poise

Answers for PP II GPAT Questions

1	A	6	A	11	B	16	A	21	A	26	A	31	D
2	A	7	B	12	D	17	D	22	B	27	B	32	B
3	B	8	A	13	D	18	B	23	A	28	A	33	C
4	C	9	D	14	A	19	A	24	A	29	A	34	D
5	B	10	A	15	A	20	A	25	A	30	C	35	A

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